PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
SMART & BIGGAR
3300 - 1000 rue de La Gauchetiere ouest
MONTREAL, Quebec
Canada, H3B 4W5

ON DOCKET
MCD

- info TOF USTAU June 2, 2005
- amend art 19 May 2, 2005
- submit comments on abstract April 2/05

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 02 March 2005 (02-03-2005)
Applicant's or agent's file reference 85795-74	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No PCT/CA2004/001843	International filing date *(day/month/year)* 20 October 2004 (20-10-2004)
Applicant THERATECHNOLOGIES INC. ET AL	**AGENT - INFO. TO BE FILED IN US, AU or IN?**

1: [X] The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and is transmitted herewith.

Filing of amendments and statement under Article 19 :
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46) :

When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35

For more detailed instructions, see the notes on the accompanying sheet.

2. [ ] The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. [ ] **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that :

[ ] the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.

[ ] no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**
Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90*bis*.1 and 90*bis*.3, respectively, before the completion of the technical preparations for the international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/CA *Commissioner of Patents* *Canadian Patent Office* *Box PCT, Ottawa/Gatineau K1A 0C9* Facsimile No.	Authorized officer Lucille Leonard (819) 953-1737

NOTES TO FROM PCT/ISA/220

These Notes are intended to give instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article," "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

What parts of the international application may be amended?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Administrative Instructions, Section 205(b)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments?

Letter (Section 205(b)) :

The amendments must be submitted with a letter.
The letter will not be published with the international application nd the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").
The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

(i) the claim is unchanged;
(ii) the claim is cancelled;
(iii) the claim is new;
(iv) the claim replaces one or more claims as filed;
(v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter :

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
"Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."

2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
"Claims 1 to 15 replaced by amended claims 1 to 11."

3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
"Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
"Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."

4. [Where various kinds of amendments are made]:
"Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under Article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1*bis*(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43*bis*.1(c)).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, Volume II.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To:
SMART & BIGGAR
3300 - 1000 rue de La Gauchetiere ouest
MONTREAL, Quebec
Canada, H3B 4W5

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(date/month/year)* 02 March 2005 (02-03-2005)

Applicant's or agent's file reference	FOR FURTHER ACTION
85795-74	See paragraph 2 below

International application nº	International filing date *(date/month/year)*	Priority date *(date/month/year)*
PCT/CA2004/001843	20 October 2004 (20-10-2004)	20 October 2003 (20-10-2003)

International Patent Classification (IPC) or both national classification and IPC

A61K 38/25 A61P 21/00

Applicant THERATECHNOLOGIES INC. ET AL

1. This opinion contains indications relating to the following items :

[X]	Box No. I	Basis of the opinion
[ ]	Box No. II	Priority
[X]	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
[X]	Box No. IV	Lack of unity of invention
[X]	Box No. V	Reasoned statement under Rule 43*bis*.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
[ ]	Box No. VI	Certain documents cited
[ ]	Box No. VII	Certain defects in the international application
[X]	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/CA	Authorized officer
Commissioner of Patents *Canadian Patent Office* *Box PCT, Ottawa/Gatineau K1A 0C9*	Nicole Harris (819) 997-4541

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language which it was filed, unless otherwise indicated under this item.

[ ] This opinion has been established on the basis of a translation from the original language into the following language __ , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of :

a. type of material

[X] a sequence listing

[ ] table(s) related to the sequence listing

b. format of material

[X] in written format

[X] in computer readable from

c. time of filing/furnishing

[X] contained in the international application as filed.

[X] filed together with the international application in computer readable form.

[ ] furnished subsequently to this Authority for the purposes of search.

3.[ ] In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments :

Remarks: Claims 1-48 and 50-73 are directed towards methods of medical treatment of a human or animal which do not require examination under Rule 67.1 (iv) of the PCT. However, a written opinion with regards to novelty, inventive step and industrial applicability has been established based on the use of the compounds/compositions.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/CA2004/001843

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of :

[ ] the entire international application

[ ] claims Nos. ___

because

[ ] the said international application, or the said claims Nos. ____ relate to the following subject matter which does not require an international preliminary examination *(specify)* :

[ ] the description, claims or drawings *(indicate particular elements below)* or said claims Nos. ___ are so unclear that no meaningful opinion could be formed *(specify)* :

[ ] the claims, or said claims Nos. ___ are so inadequately supported by the description that no meaningful opinion

[ ] no international search report has been established for said claims Nos. ___.

[X] the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that :

the written form	[ ]	has not been furnished
	[X]	does not comply with the standard
the computer readable form	[ ]	has not been furnished
	[X]	does not comply with the standard

[] the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

[X] See Supplemental Box for further details.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CA2004/001843

Box No. IV **Lack of unity of invention**

1 [ ] In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has :

[ ] paid additional fees

[ ] paid additional fees under protest

[ ] not paid additional fees

2 [ ] This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3 This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

[X] complied with

[ ] not complied with for the following reasons :

4 Consequently, this opinion has been established in respect of the following parts of the international application :

[X] all parts

[ ] the parts relating to claims Nos. ____

Box No. V reasoned statement under Rule 43*bis*.1(a)(I) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2-7, 12, 18-21, 26-31, 36, 42-45, 51-56, 61,64-70 and 75-80	YES
	Claims	1, 8-11, 13-17, 22-25, 32-35, 37-41, 46-50, 57, 60, 62, 63 and 71-74	NO
Inventive step (IS)	Claims		YES
	Claims	1-80	NO
Industrial applicability (IA)	Claims	1-80	YES
	Claims		NO

2. Citations and explanations :
D1: CA2367461 BRISTOL-MYERS SQUIBB COMPANY, (Swartz SG et al.), 21 September 2000
D2: CA2357853 PFIZER PRODUCTS INC, (Fryburg DA), 28 March 2002
D3: US6458764 THERATECHNOLOGIES INC, (Gravel D et al.), 01 October 2002

Novelty and Inventive Step

D1 discloses heterocyclic aromatic compounds which function as growth hormone (GH) secretagogues.

D2 discloses growth hormone (GH) secretagogues and methods of use thereof for increasing muscle mass or muscle strength.

D3 discloses methods of producing growth hormone (GH) secretagogues, (growth hormone releasing factor secretagogues; including TH 9507), of the formula X-GRF-peptide, wherein X is a hydrophobic tail, and uses thereof in treating osteoporosis and improving protein anabolism.

The problem to be solved by the present invention is to provide growth hormone secretagogues for use in treating cachexia and wasting disease by improving muscle mass and function.

Claims 1, 8-11, 13-17, 22-25, 32-35, 37-41, 46, 49 and 74 lack novelty under Article 33(2) of the PCT and are anticipated by D1. D1 discloses heterocyclic aromatic compounds which function as growth hormone secretagogues. The compounds are used for treating obesity, osteoporosis, increasing lean body mass, improvement of muscle mass and strength associated with, cachexia, HIV wasting syndrome, long term critical illness, maintenance of muscle strength and function in the elderly, and the prevention of frailty.

Claims 1, 8-11, 22-25, 32-35, 46-50, 57-60, 62, 63 and 71-74 lack novelty under Article 33(2) of the PCT and are anticipated by D2. D2 discloses growth hormone (GH) secretagogues and methods of use thereof for increasing muscle mass or muscle strength. Claims 2-7, 12, 18-21, 26-31, 36, 42-45, 51-56, 61,64-70 and 75-80 appear to meet the requirements of Article 33(2) of the PCT with respect to novelty.

D3 discloses methods of producing growth hormone (GH) secretagogues, (growth hormone releasing factor secretagogues; including TH 9507), of the formula X-GRF-peptide, wherein X is a hydrophobic tail, and uses thereof in treating osteoporosis and improving protein anabolism. D1 and D2 define the general state of the art regarding the utility of (GH) secretagogues. In particular, D1 discloses the use of GH secretagogues to include maintenance of muscle strength and function in elderly humans, treatment of osteoporosis, stimulation and increase in muscle mass and muscle strength, stimulation of the immune system, attenuation of protein catabolic response after major operation or trauma, reducing cachexia and protein loss due to chromic illness such as cancer or AIDS, and as a therapy for syndrome X (page 48-49.) D2 discloses the use of GH secretagogues for "the treatment or prevention of osteoporosis, congestive heart failure, frailty associated with aging, obesity, accelerating bone fracture repair, attenuating protein catabolic response after major operation, reducing cachexia and protein loss due to chronic illness" (page 3 lines 32- page 4 lines 4). It would be obvious for someone skilled in the art knowing that the GH secretagogues of D3 improve protein anabolism, to use said GH secretagogues in place of the GH secretagogues of D1 or D2 to treat conditions that result in improved protein anabolism, namely, to improve muscle strength and function in the treatment of frailty associated with aging, attenuating protein catabolic response after major operation or trauma, and reducing cachexia and protein loss due to chronic illnesses including cancers and wasting syndrome. Claims 2-7, 26-31, 51-56 and 75-80 do not involve an inventive step (Article 33(3) of the PCT).

continued in PCT/ISA/237 Supplemental Box

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of :

Box No. III

SEQ ID NO:1 of the sequence listing does not comply with the standard provided for in Annex C and Annex C-bis of the Administrative Instructions. The use of "Xaa" may define more than one amino acid in a single position, but rather than using "Xaa" the applicant should positively define all amino acids and specify each "variant" as having one or more substitutions at a designated position. Further, the substitution of "Xaa" must not alter the length of said sequence. Such is not the case with the substitution at position 30, where "Xaa" is an amino acid sequence of 1 up to 15 residues or is a bond.

Box No. V

Novelty and Inventive Step

Further, the general use of (GH) secretagogues for increasing muscle function in a patient would be obvious in view of the general state of the art as outlined in D1 and D2. Claims 1, 8-11, 13-17, 22-25, 32-35, 37-41, 46-50, 57-60, 62-66 and 71-74 do not involve an inventive step (Article 33(3) of the PCT). Finally, monitoring parameters indicative of body composition and condition would be apparent to those skilled in the art. As such claims 12, 18-21, 36, 42-45, 61 and 67-70 do not involve an inventive step (Article 33(3) of the PCT). Therefore, claims 1-80 do not involve an inventive step (Article 33(3) of the PCT).

Industrial Applicability

Certain contracting states of the PCT do not recognize the subject-matter of claims 1-48 and 50-73, methods of medical treatment, as industrially applicable. These states may however allow claims to a known formulation for a first medical use and the use of such formulations for the manufacture of a medicament for a new medical treatment. An opinion based on the industrial applicability of claims 1-48 and 50-73 has been established based on the use of the compounds/compositions. Claims 1-80 are considered to be industrially applicable (Article 33(4) of the PCT).